======= EPODOC =======

TI - Silicon-containing non-oxide ceramic body production

AB - Production of a silicon-containing non-oxide ceramic body, having surface silicate glaze-forming components of thermal expansion coefficient matching that of the ceramic base material, involves forming the glaze at 600-1770 deg C and taking into account the quantity of reactive silicon dioxide formed in the glaze. Also claimed is a silicon-containing non-oxide ceramic body produced by the above process and having a silicate-based glaze on its surface. Preferably, the body is a sintered silicon nitride or carbide body which is glazed by applying an alkali or alkaline earth metal compound or a rare earth metal compound and chemically reacting the compound with the silicon nitride or carbide in an oxidising atmosphere at 600-1400 deg C (for an alkali or alkaline earth metal compound) or at 1100-1500 deg C (for a rare earth metal compound).

PN - DE19712918 C 19980903

AP - DE19971012918 19970327

PR - DE19971012918 19970327

PA - FRAUNHOFER GES FORSCHUNG (DE)

IN - HERRMANN MATHIAS DR RER NAT (DE); SCHUBERT CHRISTIAN DR RER NAT (DE); TANGERMANN KATJA DIPL ING (DE); KLEMM HAGEN DR RER NAT (DE)

CT - ***** Citations of A -Document: *****

- DE3314221 A1 [ ]; DE2152066 A [ ]; EP0615964 A2 [ ]
- ***** Citations of C1-Document: *****
- DE3314221 A1 [ ]; DE2152066 A [ ]; EP0615964 A2 [ ]

DT - *

======= WPI =======

TI - Silicon-containing non-oxide ceramic body production - involves applying and firing silicate glaze-forming components

AB - DE19712918 Production of a silicon-containing non-oxide ceramic body, having surface silicate glaze-forming components of thermal expansion coefficient matching that of the ceramic base material, involves forming the glaze at 600-1770 deg. C and taking into account the quantity of reactive silicon dioxide formed in the glaze.

- Also claimed is a silicon-containing non-oxide ceramic body produced by the above process and having a silicate-based glaze on its surface.
- Preferably, the body is a sintered silicon nitride or carbide body which is glazed by applying an alkali or alkaline earth metal compound or a rare earth metal compound and chemically reacting the compound with the silicon nitride or carbide in an oxidising atmosphere at 600-1400 deg. C (for an alkali or alkaline earth metal compound) or at 1100-1500 deg. C (for a rare earth metal compound).
- USE - For producing glazed heavy duty non-oxide ceramic bodies, including entire pots and chemical equipment fittings.
- ADVANTAGE - The process forms a corrosion protective, surface levelling and optionally coloured coating thus reducing the costs of post-machining for surface smoothing and polishing.
- (Dwg.0/0)

PN - DE19712918 C1 19980903 DW199839 C04B41/86 011pp

PR - DE19971012918 19970327

PA - (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN

IN - HERRMANN M; KLEMM H; SCHUBERT C; TANGERMANN K

MC - L02-H02A L02-H02B2

DC - L02

IC - C04B41/68 ;C04B41/81 ;C04B41/86 ;C04B41/87

AN - 1998-448277 [39]